Background: Endurance athletes are at an increased risk of atrial fibrillation (AF) when compared to the general population. However, the risk of stroke in athletes who develop AF is not known.

Purpose: We aimed to assess the risk of stroke in endurance veteran athletes with AF when compared to those that remain in sinus rhythm.

Methods: A questionnaire was broadcasted through social media and sports clubs. Individuals that had competed in at least one competitive event and were ≥40 years old were included. Self-reported demographic, past medical history and training history data were collected and a CHA2DS2-VASc was calculated. Binary logistic regression was used to assess variables associated with AF and stroke.

Results: The survey received 1002 responses from 41 countries across Africa, Asia, Australasia, Europe, North and South America, and 942 were included in the final analysis. The average age was 52.4±8.5 years and 83.7% were male. The most common sports were cycling (n=677, 71.9%), running (n=558, 59.2%) and triathlon (n=245, 26%). There were 190 (20.2%) individuals who reported AF and 26 (2.8%) individuals who reported stroke, of which 14 (53.9%) had AF. Lifetime exercise dose (OR: 1.02, 95% CI: 1.00, 1.03, p=0.02) and swimming (OR: 1.56, 95% CI: 1.02, 2.39, p=0.04) were associated with AF in multivariable analysis. AF (OR: 4.18, 95% CI: 1.80, 9.72 p<0.01) was positively associated with stroke, even in individuals with a CHA2DS2-VASc of 0 or 1 (OR: 4.20, 95% CI: 1.83, 9.66, p<0.01) (Figure 1).

Conclusions: This survey provides early evidence that the risk of stroke in veteran endurance athletes who develop AF is not negligible, even in those deemed to be at low risk by CHA2DS2-VASc score. Longitudinal studies are needed to substantiate these findings to inform decisions around anticoagulation.